[57]   **ABSTRACT**

An audio type signal is encoded. The signal is first divided
into bands. For each band, a yardstick signal element is
selected. The yardstick may be the signal element having the
largest magnitude in the band, the second largest, closest to
the median magnitude, or having some other selected mag-
nitude. This magnitude is used for various purposes, includ-
ing assigning bits to the different bands, and for establishing
reconstruction levels within a band. The magnitude of non
yardstick signal elements is also quantized. The encoded
signal is also decoded. Apparatus for both encoding and
decoding are also disclosed. The location of the yardstick
element within its band may also be recorded and encoded,
and used for efficiently allocating bits to non-yardstick
signal elements. Split bands may be established, such that
each split band includes a yardstick signal element and each
full band includes a major and a minor yardstick signal
element.